



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/730,195	12/05/2000	Eric J. Helmsen	FORE-76	7958

7590 01/18/2005
Ansel M. Schwartz
201 N. Craig Street, Suite 304
Pittsburgh, PA 15213

EXAMINER

MEEK, JACOB M

ART UNIT	PAPER NUMBER
----------	--------------

2637

DATE MAILED: 01/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/730,195

Applicant(s)

HELMSSEN ET AL.

Examiner

Jacob Meek

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 16- 23, 25 - 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 16- 23, 25 - 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's arguments (see pages 14 – 16), filed September 7, 2004, with respect to the rejection(s) of claim(s) 1 – 9, and 16 – 18 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sutardja and Powell.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because of numerous handwritten mark-ups. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 16, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, a source for producing a signal is claimed, however, based on examiner's interpretation of operation of invention it is not clear if this source is Input

Reference Selector, or OXCO (figure 6, 20). Also, if said signal is from OCXO then claim does not address the mechanism for removing jitter and wander from input reference signal, which appears to be the intent of the invention. An OCXO is known to be a stable frequency reference, which does not require the removal of jitter.

With regard to claim 16, applicant claims the removal of jitter from a signal however, as noted above in claim 1, it is not clear what signal is being specified.

With regard to claim 27, a source for producing a signal is claimed, however, based on examiner's interpretation of operation of invention it is not clear if this source is Input Reference Selector, or OXCO (figure 6, 20). Also, if said signal is from OCXO then claim does not address the mechanism for removing jitter and wander from input reference signal, which appears to be the intent of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 - 4, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutardja (US Patent 6,732,286) in view of Powell (US Patent 5,754,607).

With regard to claim 1, Sutardja teaches an apparatus a timing distribution apparatus comprising a source for producing a signal (see Figure 2, 280 and column 2, lines 13 – 18)), a first filter (see Figure 2, 205 and column 6, lines 13 – 36 where frequency integrator is interpreted as providing jitter filtering), a second filter (see Figure 2, 210 and column 6, lines 37 – 52 where this is interpreted as providing wander filtering). Sutardja is silent with respect

to jitter and wander but incorporates Powell by reference. Powell discloses an apparatus for use in a SONET network element which addresses jitter and wander requirements (see column 1, lines 31 – 44, where reference 32 of figure 3 provides equivalent functionality as wander filter). It would have been obvious to one of ordinary skill in the art at the time of invention to adapt Sutardja's invention to incorporate Powell's invention to produce a timing apparatus with rapid acquisition and stable operating characteristics.

With regard to claim 2, Sutardja teaches an apparatus with a first filter including a tuneable digital synthesizer for producing a clock source (see Figure 2, 280 and column 6, lines 53 – 60).

With regard to claim 3, Sutardja teaches his invention is digitally based (see column 2, lines 1 – 18) and utilizes shift registers and digital synthesizers, which are known to be clocked elements. Therefore, it would have been obvious to one of ordinary skill of art at the time of invention to provide oscillator for the clocking of the digital circuitry, as this is an inherent requirement for operation.

With regard to claim 4, Sutardja teaches his apparatus provides a reference clock input for comparison to the clock signal (see figure 2, S_T and column 6, lines 18 – 21).

With regard to claim 16, the steps claimed as method are nothing more than a restatement of the function of specific components of the apparatus as claimed above and therefore would have been obvious considering the aforementioned rejection of claim 1.

5. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bedrosian (US Patent 5,740,211) in view of Sutardja ('286) in further view of Powell ('607).

With regard to claim 25, Bedrosian teaches a master hardware system (see figure 1, 110, 120, 140 and column 3, lines 7 – 25) and a backup hardware system (see figure 1, 111,

121, 141 and column 3, lines 7 – 25) that allows master hardware system to fail without any phase discontinuity (see column 3 lines 57 – 67) each hardware system compromising the master hardware system (see Figure 1, 110, 120, 130, and 140) having first and second signals that are sent to a backup unit (see Figure 9A, Monitor Blocks where inputs are interpreted as 1st and 2nd master signals) that informs backup hardware system that master hardware system is either a failed or non-failed condition (see column 1, line 64 – column 2, line 4), the master system producing a timing distribution signal sent to backup hardware system and used as reference (see figure 1, 120, 121, 140, 141 and column 4, lines 37 – 44 where this is interpreted as equivalent) where backup hardware does not transmit timing distribution (see column 37 – 44 where this input selection is interpreted as equivalent functionality) and where backup system becomes master in event of failure and provides timing without discontinuity (see column 4, lines 1 – 23). Bedrosian is silent with respect to a 1st and 2nd filter for jitter and wander but discloses his device is used in ATM networks which are known to be SONET based. Sutardja ('286) in view of Powell ('607) teach a clock circuit with a 1st and 2nd filter. It would have been obvious to one of ordinary skill in the art at the time of invention to combine Sutardja / Powell with Bedrosian's invention to provide a clock with superior performance (see Sutardja, column 1, lines 65 – 67).

With regard to claim 26, the functions claimed as apparatus are nothing more than a restatement of the function of steps of the method as claimed above and therefore would have been obvious considering the aforementioned rejection of claim 25.

Allowable Subject Matter

6. Claims 5 – 13, and 17 – 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Cited Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Blazo (US Patents 5,742,208 and 5,757,652) discloses an apparatus useful for the generation or measurement of jitter and substantially teach the architecture of the claimed invention and would be easily adaptable for one of ordinary skill in the art. Janesch et al (US Patent 6,198,353) and Brown et al (6,33,678) disclose synthesizers that are very similar in architecture to that claimed by applicant. Jones et al (US Patent 6,078, 595), Bertacchini et al (US Patent 6,341,149), and Wilcox (6,107.855) all show variations of hitless clock protection switching. Tarleton (US Patent 5,956,379), Urbansky (US Patent 6,075,387), and Acimovic et al (US Patent 6,246,738) disclose apparatus which address jitter and wander requirements for synchronization.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



JAYANTI PATEL
SUPERVISORY PATENT EXAMINER

Art Unit: 2637

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM



JAYANTI PATEL
SUPERVISORY PATENT EXAMINER